

**IN THE CLAIMS:**

Claim 1 (Currently amended): A process for the preparation of aerogels comprising,  
including

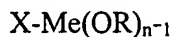
- a) ~~the exchange of~~ exchanging the liquid phase of ~~the~~ an aquagel with xenon; and
- b) ~~the extraction of~~ extracting xenon from the xenon exchanged aquagel of step a) ;

and

- c) optionally, recovering xenon from step b) ~~the possible recovery thereof.~~

Claim 2 (Currently amended): A process for the preparation of aerogels according to claim 1, ~~including a previous phase of~~ further comprising, prior to step a), forming an aquagel from a suitable precursor under conditions suitable for hydrolysis/condensation

Claim 3 (Currently amended): A process for the preparation of aerogels according to claim 2, wherein the suitable precursor is ~~hydrolysis/condensation reaction is carried out starting from an alkoxyde precursor of~~ having the formula:



in which Me is a metal belonging to the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Groups of the Element Periodic Table System; n is integer and represents the valence of Me; X is either -OR or -R where -OR is an alkoxyde group and -R is an organic radical, linear or branched, ~~with~~ having ~~a number of carbon atoms~~ up to 10 carbon atoms.

Claim 4 (Currently amended): A process for the preparation of aerogels according to claim 3 wherein ~~where~~ the suitable precursor is preferably tetramethoxysilane ~~[[,]]~~ or tetraethoxysilane.

Claim 5 (Currently amended): A process for the preparation of aerogels according to claim 3 wherein ~~where~~ the hydrolysis ~~is reaction is accomplished~~ in presence of an acid selected ~~among~~ from hydrochloric, nitric or acetic acid.

Claim 6 (Currently amended): A process for the preparation of aerogels comprising including

- a) forming an aquagel from a suitable precursor under suitable conditions for hydrolysis/condensation;
- b) exchanging the liquid phase of an aquagel with liquid xenon;
- c) extracting xenon from the aquagel of step b) under supercritical conditions; and
- d) optionally, recovering xenon from step c) ~~the exchange of the aquagel liquid phase with xenon according to claim 1 where such an exchange is accomplished with liquid xenon and the extraction thereof is accomplished under supercritical conditions.~~

Claim 7 (Currently amended): A process for the preparation of aerogels according to claim 6 wherein the exchange ~~of the liquid in the aquagel~~ is carried with liquefied xenon at temperature between 0 and 16.6°C.

Claim 8 (Currently amended): A process for the preparation of aerogels according to claim 6

~~wherein where the hypercritical extraction of xenon from the wet gel is carried~~ super critical  
conditions include a temperature higher than 16.6°C.

Claim 9 (Currently amended): A process for the preparation of aerogels according to claim 6  
~~wherein where the hypercritical extraction of xenon is carried at~~ super critical conditions  
include a pressure higher than 58.4 bar.

Claim 10 (Currently amended): A process for the preparation of aerogels ~~including the~~  
~~exchange of the aquegel liquid phase with xenon~~ according to claims 1 and 6 ~~characterized in~~  
~~that it comprises also a xenon~~ recovering xenon phase at the end of the extraction.